

CERTAMEN MELASTOMATACEAE XXXIX

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ABSTRACT

The following new species of South American Melastomataceae are described and affinities discussed: *Meriania broccha* (Venezuela); *Macrocentrum huberi* (Venezuela); *Tibouchina huberi* (Venezuela); *Miconia aymardii* (Venezuela); *Miconia laciniata* (Perú); *Miconia elvirae* (Venezuela); *Miconia silverstonei* (Colombia); *Alloneuron dorrii* (Ecuador); *Huilaea ecuadorensis* (Ecuador); *Leandra gorzulae* (Venezuela); *Blakea vallensis* (Colombia).

KEY WORDS: Melastomataceae, Colombia, Ecuador, Perú, Venezuela, *Alloneuron*, *Blakea*, *Huilaea*, *Leandra*, *Macrocentrum*, *Meriania*, *Miconia*, *Tibouchina*.

*Meriania broccha* Wurdack, *sp. nov.* TYPE: *B.M. Boom*, *A.L. Weitzman*, & *C. Brewer-Carías 5512*, collected near Neblina Camp I on northwest plateau, 8.5 km NE of Base Camp, 0° 52' N, 66° 05' W, Cerro de la Neblina, Terr. Amazonas, VENEZUELA, elev. 1920-1880 m, 1 Feb 1985. "Corolla pinkish purple." (HOLOTYPE: VEN!; Isotype: US!).

*M. neblinensi* Wurdack affinis, petiolis brevioribus, calycis lobis interioribus longioribus, dentibus exterioribus prominenter eminentibus ovarii collo evoluto differt.

Frutex 0.3-1.0 m. Indumentum ut in *M. neblinensi*. Petioli 0.5-1.0 cm longi; lamina (4-)6-8 X (2.0-)2.5-4.5 cm late lanceata vel oblongo-elliptica apice acuto vel obtuso basi obtusa, rigida et integra, 3(-5) nervata. Inflorescentia terminalis 5-7 flora, floribus 5-meris, pedicellis ca. 5 mm longis, bracteolis 5-7 X 1-2 mm subsistentibus. Hypanthium (ad torum) 7 mm longum hebetate 10-costatum; calycis tubus ca. 1 mm longus, lobis interioribus 4-7

X 3-4 mm ovato-oblongis, dentibus exterioribus crassis 5-9 mm eminentibus. Petala 21-22 X 15-17 mm glabra i.s. paulo verruculosa oblongo-obovata apice rotundato-truncato. Stamina dimorphica glabra; filamenta 13.0 mm vel 15.5 mm longa; antherarum thecae declinatae subulato-curvatae uniporosae (poro dorsaliter inclinato 0.15-0.20 mm diam.) 11 X 1.3 mm vel 7.5-8.0 X 1.3 mm, connectivo 0.3-0.4 mm prolongato dorsaliter dente 0.4 mm vel 0.2 mm alto et appendice ascendenti hebeti per 3.7-4.0 mm vel 3.0-3.5 mm libera armato. Stigma non expansum; stylus 15 X 0.5-0.1 mm glaber in ovarii collum 0.5 mm immersus; ovarium 3-loculare glabrum.

Paratypes (both VENEZUELA, Cerro Neblina): *R. Liesner 16015*, Camp III, elev. 1750-1850 m (US!, VEN!, fruiting); *Boom & Weitzman 5750*, Camp X, elev. 1670-1690 m ("Corolla pinkish purple; anthers yellow, connective dark purplish black with whitish edges and tips") (US!, VEN!).

The suggested relative, still known only from the holotype, has petioles 2-4 cm long, ovate interior calyx lobes 2 mm long with nonprojecting external teeth, smaller stamens, and truncate ovary apex. The stamens in both species are qualitatively similar, with blunt ascending connective appendage and anther pores in both series dorsally inclined. The epithet alludes to the projecting calyx teeth. In Cogniaux' arrangement, *Meriania broccha* would key to near the Bahian (Brazil) *M. calophylla* (Cham.) Triana, which has petioles 2-4 cm long, somewhat thinner blades, terete hypanthia, shorter (2.0-2.5 mm) interior calyx lobes, and somewhat smaller stamens.

*Macrocentrum huberi* Wurdack, *sp. nov.* TYPE: *O. Huber & L. Izquierdo 12771*, collected on granite in NE sector of Sierra de Maigualida, headwaters of Río Chajura (west affluent of Río Erebató), Dto. Cedeño, Edo. Bolívar, VENEZUELA, 5° 33' N, 65° 13' W, elev. 2100 m, 13 Nov 1988. "Pedicelo e hypanthio verde claro-rosado, corola lila intenso vistosa, estambres amarillento. Frutos rojo claro. Hojas carnosas." (HOLOTYPE: VEN!; Isotype: US!).

*M. anychioidi* Gleason et *M. maguirei* Wurdack affinis, foliorum laminis esetulosis et eciliatis pedicellis longioribus differt.

Suffrutex 0.2-0.4 m, ramulis sicut foliis hypanthiisque sparse glandulis deciduis obsitis; ramulorum internodi esetosi, nodis obscure caduceque setulosi. Folia in quoque jugo essentialiter isomorphica; petioli 1-2 mm longi; lamina (0.8-)1.2-1.5 X (0.25-)0.40-0.60 cm apice hebeti-acuto basi acuta, coriacea et integra esetosa uninervata. Flores 4-meri in ramulis foliosis terminales solitarii, pedicellis ca. 1.5 cm longis infra bracteolas et 2 mm longis supra bracteolas, bracteolis ca. 5 X 1.5-1.6 mm subpersistentibus; hypanthium (ad torum) 2.5 mm longum 8-costatum; calycis tubus

0.5 mm longus extus ad torum setulosus, lobis interioribus 2.6 X 3.8 mm oblati ca. 0.5 mm imbricatis glanduloso-ciliolatis, dentibus exterioribus non eminentibus. Petala glabra 8.3-8.5 X 7.2-7.8 mm obovata apice truncato. Stamina isomorphica glabra; filamenta 3.3 mm longa; antherarum thecae 1.5-1.6 X 0.35 mm, connectivo 0.3 mm prolongato dente dorsali 0.25 mm longo. Stigma non expansum; stylus 5.5 X 0.15-0.20 mm glaber in ovarii collo ca. 0.2 mm immersus; ovarium 3-loculare glabrum; fructus 0.8-0.9 cm longus.

Both suggested relatives have at least young leaves ciliate and obscurely serrulate (but 1 nerved) and pedicels only 3-6 mm long. *Macrocentrum anychioides* Gleason (now known also from Cerro Marahuaca, *Liesner 17650*) also has larger petals and anthers, while *M. maguirei* Wurdack has smaller petals and anthers.

*Tibouchina huberi* Wurdack, *sp. nov.* TYPE: *O. Huber 12686*, collected on northwest part of Serra de Maigualida in headwaters of Río Iguana (affluent of Río Asisa), Dep. Atures, Terr. Amazonas, VENEZUELA, 05° 43' N, 65° 19' W, elev. 1720 m, 25 Mar 1988. "Sufrútice de 0.5-1 m, muy ralo, frecuente in matorral. Hypanthio rojizo, corola morada, estambres blanco crema." (HOLOTYPE: VEN!; Isotype: US!).

*T. fraternae* N.E. Brown affinis, foliorum laminis supra aequaliter strigulosis non striolatis floribus maioribus differt.

Fruticosa 0.5-1.0 m; ramuli sicut petioli et laminarum subtus venae primariae squamis lanceatis ca. 1.0-1.5 mm longis vix ciliolatis dense strigosi. Petioli 3-5(-7) mm longi; lamina 1.5-2.5(-4.5) X 1(-2) cm elliptica apice acuto vel anguste obtuso basi obtusa, coriacea, supra modice et aequaliter strigulosa pilis ca. 2/3 adnatis parte libera ca. 0.5-0.7 mm longa essentialiter laevi, subtus in superficie sparsiuscule appresso-setulosa pilis sublaevibus parte libera ca. 0.5-0.7 mm longa, 3-nervata nervis secundariis nervulisque non visis. Flores 5-meri in ramulis 1-5 terminales supra bracteas ca. 1.5 mm pedicellati, bracteis duabus liberis ca. 12 X 4.5 mm ovato-oblongis extus strigulosis intus apicaliter per 1/2 strigulosis. Hypanthium (ad torum) 7 mm longum extus densissime squamis dense ciliolatis ovatis 2-3 mm longis ca. 1 mm acuminatis obsitum; calycis tubus ca. 0.5 mm longus, lobis persistentibus 6.5 X 2.5 mm lanceatis intus glabris vel sparsissime strigulosis. Petala ca. 16 X 10-11 mm obovata breviter glanduloso-ciliolata extus ad basim sparse squamato-strigulosa. Stamina paulo dimorphica glabra, thecis (paulo immaturis) 8.0 mm vel 6.8 mm longis attenuatis ventraliter porosis (0.3 mm), connectivo infra thecas 3.2 mm vel 2.0 mm prolongato ad basim ventraliter 0.5-0.6 mm bilobato. Stigma

punctiforme; stylus 10 mm longus glaber; ovarium in parte 2/3 apicali dense sericeo-strigosum.

Paratypes (both VENEZUELA): *Huber 12742*, NE sector of Sierra Maigualida, headwaters of Río Chajura (affluent of Río Erebató), Dto. Cedeño, Edo. Bolívar, 05° 33' N, 65° 13' W, elev. 2100 m, 28 Mar 1988 (US!, VEN!); *F. Cardona 2931*, Cerro Ualipano, headwaters of Río Parucito, Terr. Amazonas, 6° N, 65° 43' W, elev. 1400-1700 m, Feb 1962 (US!).

The suggested relative has leaf blades striolate above and with sparse lines of squamae between the costa and lateral primary veins, calyx lobes ca. 4-5 mm long, and petals 11-14 X 6.5-7.5 mm. *Tibouchina dissitiflora* Wurdack has hypanthial pubescence rather like that in *T. huberi*, but leaves above striolate and unevenly pubescent, and beneath completely covered by squamae.

*Miconia aymardii* Wurdack, *sp. nov.* TYPE: *G. Aymard, R.F. Ortega, & R. Rivero 4412*, collected at the limits of Páramo de Guaramacal and cloud forest 25 km SE of Boconó, Edo. Trujillo, VENEZUELA, elev. 2200-2600 m, 23 Jan 1986. "Arbusto, pétalos blancos, estambres morados." (HOLOTYPE: PORT!; Isotype: US!).

Sect. *Amblyarrhena*. *M. trujillensi* Wurdack affinis, hypanthiis persistenter setulosis calycis dentibus exterioribus eminentibus stylis puberulis differt.

Ramuli primum obtuse quadrangulati demum teretes sicut foliorum subtus venae primariae inflorescentiaque densiuscule pilis subclavatis apicem versus asperis 0.10-0.25 mm longis setulosi. Petioli 0.7-1.2 cm longi; lamina (3.0-)4.0-5.5 X (1.5-)2.0-3.0 cm, anguste elliptico-ovata apice hebeti-acuto basi rotundato-obtusa, subrigida et subintegra ca. 0.4 mm appresso-ciliolata, supra glabra, subtus in venis secundariis sparse aspero-puberula in superficie glabra, 5 nervata vel inconspicue (usque ad 2-3 mm) plinervata nervis secundariis 1-2 mm inter se distantibus nervulis modice reticulatis (areolis 0.7-1.0 mm latis). Panicula 9-12 cm longa submultiflora; flores 4-meri, pedicellis crassis ca. 1 mm longis, bracteolis ca. 1.5 mm longis lanceatis caducis. Hypanthium (ad torum) 2.6 mm longum sparsiuscule aspero-setulosum (pilis 0.1-0.2 mm longis); calycis tubus 0.4 mm longus, lobis interioribus 1 mm longis semiorbicularibus dentibus exterioribus crassis setulosis ca. 0.5-0.7 mm eminentibus; torus intus glaber. Petala 2.7-2.8 X 1.9-2.0 mm late obovato-oblonga glabra. Stamina isomorphica glabra; filamenta ca. 2.8 mm longa; antherarum thecae 1.9 X 0.6 X 0.5 mm oblongae vix retusae poro 0.15 mm diam. paullulo dorsaliter inclinato, connectivo ca. 0.4-0.6 mm prolongato exappendiculato. Stigma non expansum; stylus 6.8 X 0.25-0.30 mm sparse glanduloso-puber-

ulus (pilis 0.15-0.20 mm longis) in ovarii collo 0.5 mm immersus; ovarium 4-loculare et ca. 0.6 inferum glabrum.

The suggested relative has glabrous hypanthia, external calyx teeth not projecting, and glabrous styles; both species occur on the Páramo de Guaramal. *Miconia arbutifolia* Naudin is perhaps more distantly related (albeit with emergent external calyx teeth), being much less pubescent with relatively narrower leaf blades and glabrous styles; *M. albertii* Gleason has rather similar pubescence but relatively narrower leaf blades, glabrous hypanthia and styles, and nonemergent external calyx teeth.

*Miconia laciniata* Wurdack, *sp. nov.* TYPE: A. Sagástegui, J. Guevara, & J. Santisteban 12994, collected in Bosque Montesecco, Chorro Blanco, Prov. Santa Cruz, Depto. Cajamarca, PERÚ, elev. 2000 m, 24 May 1987. "Arbusto de unos 3 m de alto con flores blancas." (HOLOTYPE: US 3198397!; Isotypes: F!, HUT!)

Sect. *Cremanium*. *M. mediae* (D. Don) Naudin in antherarum forma affinis, foliis distincte plinervatis in venarum axillis glabris ovario 5-loculare differt.

Ramuli primum hebeti-quadrangulati demum teretes sicut foliorum superficies hypanthiaque glabri; ramulorum nodi processibus stipuliformibus induti; processus ad basim ca. 1.5 mm coaliti, laciniis 1.5-2.5 X 0.20-0.25 mm. Petioli liberi 0.5-1.0 cm longi glabri; lamina 7-11 X (2.5-)3.0-4.5 cm apice 0.5-1.0 cm acuminato basi anguste acuta, firme membranacea et subintegra appressociliolata, ubique in superficie glabra, 5-plinervata (paribus exterioribus debilibus inclusis) pari interiore 0.5-1.0 cm supra basim divergenti venis secundariis principalibus 3-5 mm inter se distantibus nervulis lax reticulatis (areolis 1.0-1.5 mm latis). Panicula 4-6 cm longa submultiflora ramis 2-4 in quoque nodo; flores 5-meri, pedicellis 2.0-3.3 mm longis ca. 0.3-0.4 mm infra hypanthium articulatis, bracteolis ca. 2.5 X 0.5 mm caducis. Hypanthium (ad torum) ca. 3.1 mm longum et ca. 1.8 mm infra torum paulo constrictum; calycis tubus 0.2 mm altus, lobis interioribus ca. 0.2 mm altis oblati, dentibus exterioribus minutis non eminentibus. Petala glabra 1.7-2.0 X 2.0-2.1 mm suborbicularia apice paullulo retuso. Stamina paulo dimorphica glabra; filamenta ca. 2 mm longa; antherarum thecae 1.5-1.6 X 1 mm late biporosae, connectivo ad basim ventraliter 0.2-0.3 mm hebeti-bilobulato dorsaliter dente hebeti 0.2 mm vel 0.7 mm armato. Stigma capitellatum 0.6 mm diam.; stylus 4.7 X 0.30-0.35 mm glaber; ovarium 5-loculare et omnino inferum glabrum.

*Miconia media* (D. Don) Naudin has estipulate branchlet nodes, basally nerved (or barely pseudo-plinerved) leaf blades beneath, setulose in the primary vein axils, calyx lobes 0.4-0.6 mm long, and ovaries 3 celled. In hypanthial constriction, *M. laciniata* resembles *M. crocea* (Desr.) Naudin (7-8-merous flowers) and *M. grayana* Cogn. (6-merous flowers), both of which have larger petals and stamens as well as glandular-puberulous styles and ovary apices and lack pectinate nodal appendages. *Miconia trichogona* Macbride does not seem closely related to *M. laciniata*, having merely setose branchlet nodes, setose petioles, leaf blades with rounded bases and basal primary veins, no hypanthial constriction below the torus, and only partially inferior ovary.

*Miconia elvirae* Wurdack, *sp. nov.* TYPE: *J.L. Luteyn & Elvira Cotton 9635*, collected on steep slopes in montane forest 17 km beyond junction with highway NE of Boconó, Páramo Guaramacal, Dto. Boconó, Edo. Trujillo, VENEZUELA, ca. 9° 13' N, 70° 13' W, elev. 2720 m. 13 Mar 1984. "Shrub to 1.5 m tall. Stipular areas reddish. Petals white. Filaments rose. Common, but little in flower." (HOLOTYPE: VEN 232357!; Isotypes: NY!, US!).

Sect. *Cremanium*. *M. polyneurae* Triana et *M. auritinodae* Wurdack affinis. foliorum venulis subtus laxe reticulatis differt.

Frutex vel arbor 1.5-3.0 m; ramulorum internodiateretes glabri, nodis tumidis et auriculis (cingulis) 0.4-0.5 cm longis infra petiolorum insertiones armatis. Petioli (1.5-)2.0-3.5 cm longi; lamina 6-12 X 4-6 cm, elliptica vel oblongo-elliptica apice obtuso vel rotundato-obtuso basi late acuta vel obtusa, coriacea et obscure distanterque crenulato-serrulata appresso-ciliolata (ciliis 0.2-0.4 mm longis), in superficie venulisque esetosa (primum sparse furfuracea mox glabrata), subtus sparse glanduloso-punctata, breviter (0.3-0.6 cm) 3 pseudo-plinervata (pari exteriori debili neglecto) nervis secundariis 3-5 mm inter se distantibus nervulis subtus laxe reticulatis (areolis 2-3 mm latis). Panicula 7-12 cm longa submultiflora glabra ramis primariis 2 per nodum; flores 5-meri, pedicellis 1 mm longis, bracteolis 4.0-5.5 X 2 mm caducis. Hypanthium (ad torum) 3.3 mm longum glabrum; calycis tubus 0.4 mm longus, lobis interioribus 0.5 mm longis oblatis obscure glanduloso-ciliolatis dentibus exterioribus appressis crassis non eminentibus. Petala 2.5-2.7 X 1.9-2.0 mm oblongo-orbicularia apice paullulo retuso apicaliter obscure glanduloso-marginata. Stamina obscure dimorphica glabra; filamenta ca. 2.4 mm longa; antherarum thecae 1.8 vel 1.9 X 1.0 X 0.7 mm obovato-oblongae late biporosae, connectivo ad basim dente dorsali hebeti erecto et appendice ventrali bilobulata 0.35 mm longa ornato. Stigma capitellatum 0.9-1.0 mm diam.; stylus

5.0-5.3 X 0.45-0.70 mm glaber in ovarii collo ca. 0.2 mm immersus; ovarium 3-loculare et ca. 1/3 inferum cono 1 mm alto glabro.

Paratypes (all VENEZUELA): *Stergios, et al. 4803* (US!) and *Dorr, et al. 5012* (NY!, US!), both nearly topotypical, elev. 2800-2900 m; *J.J. Wurdack, et al. 2767*, from subpáramo above Piñango, Dto. Miranda, Edo. Mérida, elev. 2900 m, (US!, VEN!).

Both suggested Colombian relatives have leaf venule areoles 0.3-0.6(-1) mm wide; *Miconia polyneura* Triana has branchlets and primary leaf veins beneath sparsely dendroid-puberulous, smaller nodal stem auricles (elevated 1-2 mm), and petals fimbriate apically, while *M. auritinoda* Wurdack has longer and denser leaf ciliation, smaller flowers (hypanthium ca. 2.2 mm long, petals ca. 2.2 mm long, anther thecae ca. 1.2 mm long), and a completely inferior ovary. *Miconia manicata* Gleason is more distantly related (smaller branchlet node auricles, smaller leaves and flowers). The Dorr and Wurdack paratypes of *M. elvirae* are fruiting (28 April, 16 November), while the Stergios material is in young bud (25-26 November).

*Miconia silverstonei* Wurdack, *sp. nov.* TYPE: *F.A. Silverstone-Sopkin, N. Paz, R. Eriksson, & J. Knudsen 3849*, collected in disturbed vegetation on the eastern slopes of the Cordillera Occidental at Las Amarellas near base of Cerro del Inglés, Serranía de los Paraguas, Mun. El Cairo, Depto. El Valle, COLOMBIA, elev. ca. 2070 m, 31 Mar 1988. "Arbusto 90 cm altura; flores blancas, fruto azul-violeta o rojo-violeta." (HOLOTYPE: CUV 13460!; Isotypes: CUV!, US!).

Sect. *Chaenopleura*. *M. hymenantherae* Triana affinis, ramulis et foliis glabris foliis sessilibus amplexicaulibus petalis minoribus differt.

Ramuli teretes in nodis sicut folia primum sparse vel modice glandulis minutis caducis obsiti alioqui glabri. Folia sessilia; lamina (5-)7-12 X (2-)3-5 cm lanceata vel oblongo-lanceata apice gradatim per 1.0-2.5 cm acuminato basi 3-5 mm cordata, firme membranacea et integra distanter ciliolata (0.2 mm), in superficie glabra 3 nervata (pari exteriore tenui inframarginali neglecto) nervis secundariis plerumque 3-5 mm inter se distantibus nervulis subtus demum paulo elevatis laxe reticulatis (areolis plerumque 2-3 mm latis). Panicula 3-5 cm longa submultiflora; flores 5-meri, pedicellis 1.0-1.5 mm longis, bracteolis 2-4 X 0-1.2 mm usque ad anthesim persistentibus. Hypanthium (ad torum) 1.5 mm longum intus costulatum; calycis tubus 0.2 mm longus, lobis interioribus 0.5 X 1 mm oblatis, dentibus exterioribus crassis inframarginalibus. Petala 1.5-1.7 X 1.4-1.5 mm suborbicularia glabra. Stamina essentialiter isomorphica glabra; filamenta 1.5 mm longa; antherarum thecae 0.3

X 0.4 mm late porosae, connectivo 0.25 mm prolongato ad basim ventraliter tuberculato dorsaliter dente bilobulato 0.25 mm longo armato. Stigma vix expansum 0.4 mm diam.; stylus 1.7 X 0.35 mm glaber in ovarii collo 0.2 mm immersus; ovarium 3-loculare et 9/10 vel omnino inferum glabrum.

Paratypes (both along the Ansermanuevo-San José del Palmar Road, Chocó, COLOMBIA): *Forero, Jaramillo, Pabón, Espina, & Piñeros 2185*, Alto de Galapago near Valle del Cauca boundary, elev. 2100 m ("Arbusto de 1.2 m. Frutos verdes con tinte vino tinto. Bosque nublado") (COL!); *Lozano & Díaz 3166*, Km 55, elev. 1950-1700 m ("Subfrutex semireclinado de 1 m. Tallos verde pálido con tinte vinaceo, haz verde oscuro opaco, envés verde pálido, margen foliar rojo, hipanto, cáliz verde pálido, pétalos y estambres blanco con tinte rosado." (COL!, US!)).

*Miconia hymenantha* Triana has petiolate (1.0-0.5 cm) smaller leaves with the veins beneath setulose and petals 3.2-4.0 mm long. All of the other recently described 5-merous species of sect. *Chaenopleura* (*M. concinna* Almeda, *M. confertiflora* Almeda, *M. corazonica* Wurdack, *M. haughtii* [Gleason] Wurdack, *M. popayanensis* Wurdack, *M. superposita* Wurdack) have petiolate leaves. The general vegetative aspect of *M. silverstonei* is like that of *M. asclepiadea* Triana (Sect. *Amblyarrhena*, with much larger flowers and oblong minutely pored anthers).

*Alloneuron dorrii* Wurdack, *sp. nov.* TYPE: *L.J. Dorr & I. Valdespino 6604*, collected on new road to Zamora, banks of Río Zamora ca. 25 km east of Loja, Prov. Zamora-Chinchipec, ECUADOR, 4° 00' S, 79° 13' W, elev. 2090 m, 11 Jul 1989. "Small tree 4-5 m tall. Petals white; anthers yellow." (HOLOTYPE: NY!; Isotype: US!, 4 additional isotypes to be distributed).

*A. bullato* Wurdack affinis, foliorum laminis proportionaliter angustioribus subtus densissime barbellato-setulosis distinctius plinervatis differt.

Ramuli primum rotundato-quadrangulati demum teretes sicut petioli laminarum subtus venae primariaeque dense pilis asperis ca. 0.3 mm longis strigulosi. Petioli 1.0-1.5 cm longi; lamina 7-12 X 2.0-4.5 cm oblongo-elliptica apice anguste acuto basi acuta, rigidiuscula et integra, supra rugulosa et sparse aculeata in superficie glabra, subtus densissime pilis dendriticis apice ca. 0.5 mm setuliferis obsita, 5-plinervata pari interiore 0.5-1.0 cm supra basim divergenti nervis secundariis 2-3 mm inter se distantibus nervulis subtus paullulo elevatis areolis ca. 1.5 mm latis. Panicula 8-11 cm longa multiflora floribus in ramulis interrupto-aggregatis; flores 5-meri haplostemoni essentialiter sessiles (pedicellis 0.2 mm longis),



bracteolis non visis. Hypanthium (ad torum) 2.3 mm longum densiuscule pilis conicis asperis ca. 0.2-0.3 mm longis setulosum; calycis tubus 0.2 mm longus, dentibus interioribus 0.4 mm longis dentes exteriores aequantibus vel paulo brevioribus. Petala 2.6-2.7 X 1.4-1.5 mm obovato-oblonga apice acuto subglabra. Stamina isomorphica glabra; filamenta ca. 2.1 mm longa; antherarum thecae 1.4-1.7 X 1 X 0.6 mm oblongae poro 0.4 mm diam. dorsaliter inclinato, connectivo non prolongato dorsaliter ad basim dente descendenti acuto 0.4-0.6 X 0.4 mm armato. Stigma paulo expansum 0.2 mm diam.; stylus 6 X 0.15-0.20 mm glaber; ovarium 3-loculare et ca. 3/5 inferum apice 5-alato; fructus capsularis lateraliter dehiscens.

The suggested Colombian relative has shortly plinerved (0.3-0.5 cm) leaf blades with length/width ratio 1.7-1.9 (rather than 2.3-3.0), broadly acute blunt apices, and obtuse to rounded-obtuse bases, with the lower surface visible between the hairs. No flowering material of *Alloneuron bullatum* Wurdack has yet been collected.

*Huilaea ecuadorensis* Wurdack, *sp. nov.* TYPE: *L.J. Dorr & I. Valdespino 6294*, collected in disturbed montane forest along Gualaceo-Limón Road 21.1 km SE and below highest pass, Prov. Morono-Santiago, ECUADOR, elev. 2215 m, 15 Jun 1989. "Tree 4 m tall. Flowers pendent. Petals fleshy, pinkish-red fading to white at margins. Flower buds bright red. Anthers white." (HOLOTYPE: NY!; Isotype: US!, 3 additional isotypes to be distributed).

*H. mutisiana*e Uribe et *H. penduliflorae* Wurdack affinis, ramulorum foliorum subtus venarum primariorum pilis brevioribus foliis ad apicem late obtusis vel obtuso-rotundatis differt.

Ramuli obtuse tetragoni primum sicut foliorum subtus venae primariae pedunculi pedicellique dense pilis crassiusculis minute barbellatis plerumque ca. 0.1 mm longis induti demum glabrati; linea interpetiolaris ca. 0.1-0.2 mm elevata evoluta. Petioli 2-3 cm longi; lamina 10.0-14.5 X 7.5-9.5 cm late elliptica apice obtuso vel rotundato ca. 1 mm hebeti-mucronato basi late rotundato-obtusa, rigida et integra, ubique primum modice furfuracea supra mox glabrata subtus demum in venis secundariis venulisque sparse vel modice furfuracea in superficie mox glabrata, 7-nervata (jugo exteriori inframarginali incluso) nervis secundariis 2-3 mm inter se distantibus nervulis subtus crebre reticulatis (areolis ca. 0.3-0.4 mm latis) in venarum primariorum axillis subtus auriculis 2-6 X 1 mm (acarodomatiis?) armatis. Inflorescentiae e foliorum superiorem axillis singulae triflorae, pedunculo 4.5-7.0 cm longo arcuato;

flores 6-meri, pedicellis 1.5-2.2 cm longis et 0.5-0.8 cm infra hypanthium articulatis, bracteis (ca. 7-8 X 3 mm) et bracteolis (ca. 3-4 X 2 mm) mox deciduis. Hypanthium (ad torum) ca. 14 mm longum basaliter modice furfuraceum et verruculosum; calyx 6 mm longus paullulo (0.2 mm) 6-undulatus dentibus exterioribus crassis non vel vix eminentibus; torus intus minute glanduliferus. Petala 38-44 X 18-22 mm oblongo-obovata apice rotundato-truncato glabra extus centraliter muriculata. Stamina isomorphica glabra; filamenta 16-18 mm longa; antherarum thecae 10 X 2.5 X 3.2 mm oblongae poris duobus 0.4 mm diam., connectivo non prolongato ca. 2 mm supra basim dorsaliter minute tuberculato. Stigma non expansum; stylus 45 X 1.0-1.2 mm glaber; ovarium inferum ca. 8 mm longum et 6-loculare apice conico truncato 1 mm alto glabro.

Both suggested Colombian relatives have young stems and primary leaf veins beneath setulose with roughened hairs 0.5-1.0 mm long, as well as acute to shortly acuminate leaf blade apices. *Huilaea mutisiana* Uribe has distinctly denticulate leaf blades and external calyx teeth projecting 1.5-2.0 mm, as well as larger hypanthia; *H. penduliflora* Wurdack has plinerved leaf blades tapering to the base and somewhat smaller flowers (petals ca. 32 X 11 mm, anthers ca. 8.5 mm long). I have seen no additional material of either relative since the original descriptions.

*Leandra gorzulae* Wurdack, *sp. nov.* TYPE: *Otto Huber 12792*, collected on the NE sector of Sierra de Maigualida, headwaters of Río Chajura (west affluent of Río Erebató), Dto. Cedeño, Edo. Bolívar, VENEZUELA, 05° 33' N, 65° 13' W, elev. 2100 m, 28 Mar 1988. "Sufrútice de hasta 0.5 m, poco frecuente en herbazal y arbustal. Hojas fuertemente revolutas. Pedunculos, pedicelos, y cáliz rojo vino muy oscuro, corola reflexa rosada, estambres amarillos. Fruto de hasta 1 cm diámetro, negruzco cuando maduro." (HOLOTYPE: VEN!; Isotype: US!).

*L. chimantensi* Wurdack affinis, inflorescentiarum hypanthiorumque pilis omnibus eglandulosis floribus 5-meris differt.

Frutex 0.5-1.0 m; ramuli teretes sicut petioli inflorescentiaque dense pilis 0.5-0.7 mm longis barbellatis patentibus vel paulo recurvatis induti. Petioli 0.3-0.5 cm longi; lamina (2.5-)3.5-5.0(-6.5) X 1.5-2.5(-3.0) cm elliptica apice late acuto vel obtuso basi obtusa, coriacea et ciliata obscure serrulata marginibus interdum recurvatis, supra sparse setulosa pilis conicis 0.1-0.2(-0.3) mm longis, subtus in venis primariis modice setulosa (ad 0.5 mm) pilis asperis et in superficie sparse setulosa (pilis 0.1-0.2 mm longis), 5-nervata

nervis secundariis ca. 2 mm inter se distantibus nervulis laxè reticulatis (1.0-1.5 mm). Panicula 2.0-4.5 cm longa pauciflora; flores 5-meri ut videtur sessiles, bracteolis ca. 1 mm longis subulatis setulosis subpersistentibus. Hypanthium (ad torum) 2.3 mm longum modice setulosum pilis ca. 1 mm longis obscure barbellatis; calycis tubus 0.5 mm longus, lobis interioribus 0.3 mm altis oblatis, dentibus exterioribus setulosis ca. 1.1-1.2 mm eminentibus; torus intus glaber. Petala 2.5-2.6 X 1.0-1.1 mm lanceata glabra extus ad apicem vix carinata. Stamina isomorphica glabra; filamenta ca. 1.8 mm longa; antherarum thecae 1.6-1.7 X 0.5 mm oblongo-subulatae poro paulo ventraliter inclinato; connectivum exappendiculatum. Stigma non expansum; stylus 5 X 0.3-0.4 mm glaber; ovarium 3-loculare et  $1/4-1/3$  inferum glabrum.

Paratypes (both topotypical): *Huber & Izquierdo 12787* (US!, VEN!) and *12787a* (US!, VEN!).

*Leandra chimantensis* Wurdack has inflorescence and hypanthial pubescence in part gland tipped and flowers 4-merous, but similar roughened cauline and hypanthial hairs and glabrous 3 celled ovaries. The other 5-merous tepui species with 3 celled ovaries (*L. longisepala* Wurdack, *L. maguirei* Wurdack, *L. neblinensis* Wurdack) have smooth hairs and setulose ovary apices. At Otto Huber's request, the epithet honors Dr. Stefan Gorzula, herpetologist and fellow explorer of Sierra de Maigualida.

*Blakea vallensis* Wurdack, *sp. nov.* TYPE: *F.A. Silverstone-Sopkin, N. Paz, H. Eriksson, & J. Knudsen 3912*, collected in cloud forest on the eastern slope of the Cordillera Occidental 1 hour by jeep from El Cairo, Cerro del Inglés, Serranía de los Paraguas, Mun. El Cairo, Depto. del Valle, COLOMBIA, elev. 2430 m, 1 Apr 1988. "Arbol en cumbre del cerro; hojas coriáceas; cáliz verde claro; pétalos 6, blancos teñidas ligeramente de rosado; filamentos blancos; anteras blancas con puntas amarillas." (HOLOTYPE: CUV 13456!; Isotypes: CUV!, US!).

*B. cuatrecasii* Gleason affinis, pedunculis floribusque minoribus differt.

Ramuli primum obtuse quadrangulati demum teretes sicut folia bracteaque primum inconspicue amorfo-furfuracei mox glabrati; linea tenuis interpetiolaris ca. 0.2 mm elevata evoluta. Petioli 1.5-2.5 cm longi; lamina (7-)10-14 X (4-)5-7 cm elliptica apice rotundato basi obtusa, coriacea et integra, 5-nervata (pari tenui ca. 1 mm inframarginali incluso) nervis secundariis ca. 2(-3) mm inter se distantibus, subtus in nervorum primariorum axillis inconspicue punctatis glabris. Flores in ramulorum quoque nodo superiore 2-4; pedicelli 1.7-2.0 cm longi verrucosi; bractea oblatae obscure (0.05

mm) ciliolatae alioqui glabrae; bracteae exteriores 11 X 12-13 mm basaliter ca. 2 mm coalitae; bracteae interiores 10.5 X 18.0 mm liberae. Hypanthium (ad torum) 6 mm longum glabrum; calyx ca. 1.2 mm longus integer minute ciliolatus alioqui glaber. Petala 16 X 14-15 mm obovata (apice paulo retuso) minute (0.05-0.10 mm) ciliolata alioqui glabra. Filamenta 7 mm longa glabra; antherarum thecae 6 X 3 X 2.5 mm lateraliter cohaerentes minute biporosae, appendice dorso-basali ca. 1 mm longa hebeti. Stigma 0.3 mm diam. non expansum; stylus 9.6 X 1.0-0.3 mm glaber; ovarium 6-loculare et omnino inferum, cono apicali ca. 1.2 mm alto truncato glabro.

Paratypes (topotypical): *Silverstone-Sopkin, Paz, González, Cabrera, Garcés, & Henao 2694* (CUVC!, US!), *2811* (CUVC!, US!).

*Blakea cuatrecasii* Gleason is rather similar qualitatively but has peduncles at anthesis 3-4 cm long, outer bracts 15-18 mm long, and petals (25-)30-35 mm long. *Blakea pyzidanthus* Triana has primary leaf vein axils beneath barbellate and flowers smaller (outer bracts ca. 7 mm long, petals ca. 14 mm long).